F. G. N. KRANICH.

SAFETY ATTACHMENT FOR WRINGERS.

APPLICATION FILED MAR. 8, 1913.

1,136,241.

Patented Apr. 20, 1915.

2 SHEETS—SHEET 1.

Fig. 3.

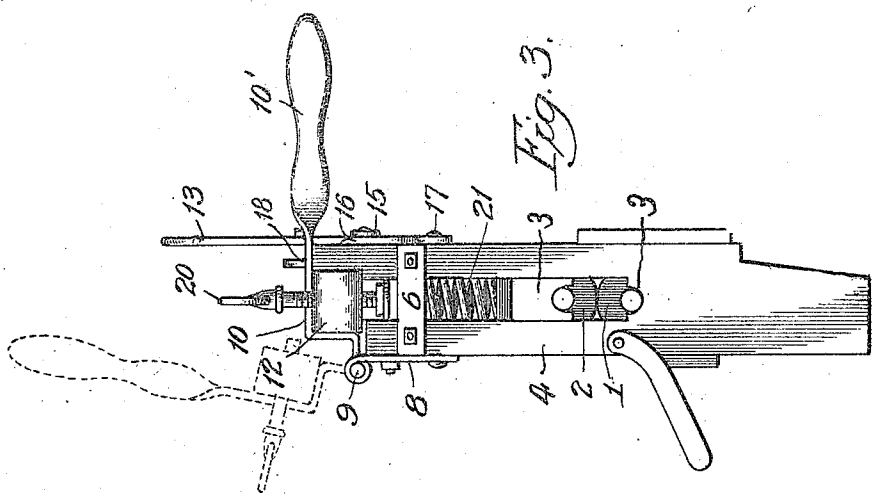


Fig. 2.

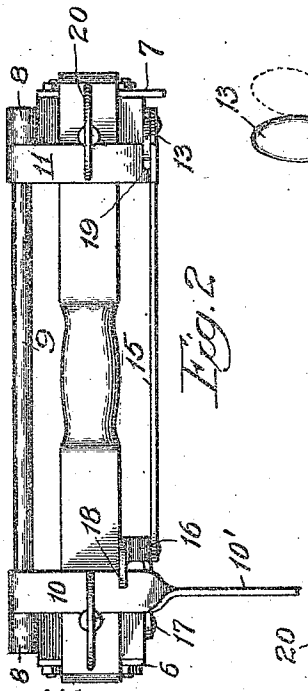
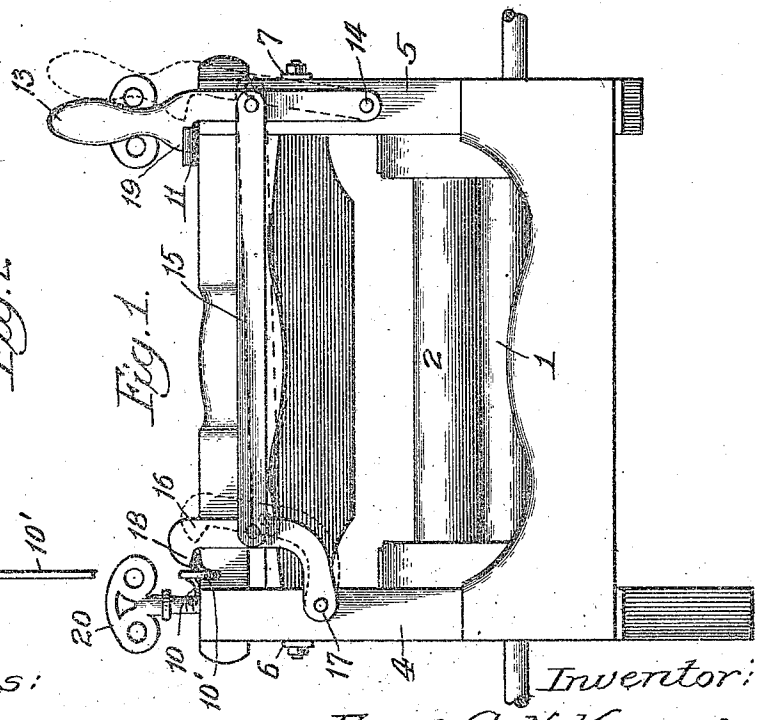


Fig. 1.



Witnesses:

John Enders

J. V. Curran.

Inventor:

Frank G. N. Kranich,

by Wallace R. Lane

Atty.

F. G. N. KRANICH.

SAFETY ATTACHMENT FOR WRINGERS.

APPLICATION FILED MAR. 8, 1913.

1,136,241.

Patented Apr. 20, 1915.

2 SHEETS—SHEET 2.

Fig. 6.

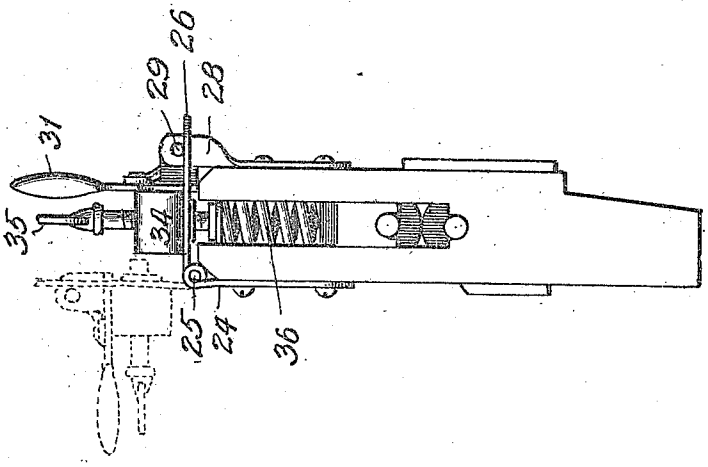


Fig. 5.

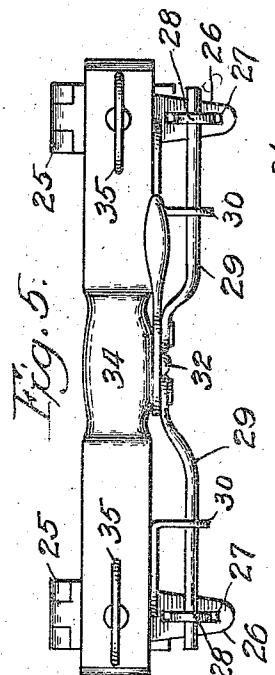
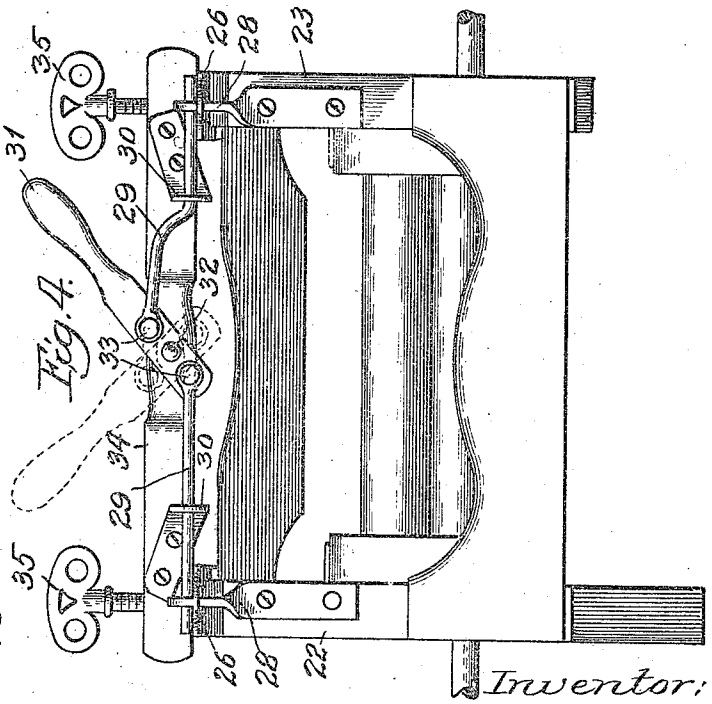


Fig. 4.



Witnesses:

John Enders

D. V. Curran

Inventor:

Frank G. N. Kranich,

by Wallace R. Lane

Atty.

UNITED STATES PATENT OFFICE.

FRANK G. N. KRANICH, OF NEWTON, IOWA, ASSIGNOR TO THE MAYTAG COMPANY, A CORPORATION OF IOWA.

SAFETY ATTACHMENT FOR WRINGERS.

1,136,241. Specification of Letters Patent. Patented Apr. 20, 1915.

Application filed March 8, 1913. Serial No. 752,809.

To all whom it may concern:

Be it known that I, FRANK G. N. KRANICH, a citizen of the United States, residing at Newton, in the county of Jasper and State of Iowa, have invented new and useful Improvements in Safety Attachments for Wringers, of which the following is a specification.

It is the object of the present invention to provide a wringer construction so arranged that in case of emergency, as for instance when clothing becomes entangled in the rolls or the operator's hand is caught between the rolls, a safety device may be tripped to unlock the upper cross bar of the wringer, thereby releasing the spring pressure and allowing the rolls to separate freely.

While the invention is of general utility in the art of wringing clothes, it is particularly advantageous when the wringer is power driven, as from an electric motor or gas engine.

The details of my invention will be made clear from the following description which is to be taken in conjunction with the accompanying drawings, wherein—

Figure 1 is a front elevation of one embodiment of my invention. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation, indicating in dotted lines the position assumed by the cross bar of the wringer after it has been released. Fig. 4 is a modified form having a somewhat different release mechanism. Fig. 5 is a plan view of the same, and Fig. 6 is an end elevation.

In the construction shown in Fig. 1 the device embodies a pair of wringer rolls 1 and 2 held in suitable bearings 3 of usual construction the upper ones being slidingly mounted in the usual way in standards 4 and 5. Standards 4 and 5 are reinforced respectively near their top ends by metal braces 6 and 7 and the rear section of each is shorter than the front section and carries a bracket 8 serving to support a rod 9 which extends the entire length of the wringer and acts as a pivotal support for the arms 10 and 11. These arms 10 and 11 are bent to lie against the rear side of the wooden cross bar 12 of the wringer and also overlap the top to form part of the latching mechanism whereby the cross-bar 12 is held in normal position.

The latching mechanism comprises a handle 13 pivotally supported at 14 to standard 5 and connected through a link 15 to a swinging latch 16 pivoted at 17 and having a hook at 18 engaging with the projecting end of arm 10, thereby holding that arm against upward movement about shaft 9 as a center. Handle 13 is also provided with a hook 19 which latches over arm 11 thereby holding that arm against upward movement so long as handle 13 is in its upright or normal position.

However, when handle 13 is tilted over into the position shown in dotted lines, Fig. 1, the arms 10 and 11 are released and the top wooden cross bar 12 of the wringer can swing back about pivot 9 into the position indicated in dotted lines, Fig. 3. The arm 10 may extend forward beyond the hook and may be shaped into a handle 10′ for more ready return of cross bar 12 to its normal position.

When the wringer is in use in the normal manner and the rollers 1 and 2 are being rotated, as for instance by means of a belt or gear drive connected with one of the roller shafts, the thumb screws 20 will be turned down in the usual way, compressing springs 21 to give the desired compression at the rolls. Handle 13 in its upright position will hold arm 11 against upward movement and through the action of link 15 and latch 16 will also hold arm 10 against upward movement. If, however, the clothes should become packed between the rolls or tangled about one of them, or if the operator's hand should be caught and drawn into the wringer, it is possible to push handle 13 over to the side far enough to release the hooks 18 and 19 and thereupon the elasticity of springs 21 will throw the cross bar 12 backward about its pivotal support 9, thus releasing the tension on the springs 21 and completely releasing the upper roll of the wringer. The swinging movement of the cross bar 12 takes place in small space and there is no danger that it will fly up and strike the operator or otherwise constitute a source of danger.

The modification illustrated in Figs. 4, 5 and 6 differs in the details of the unlatching mechanism. In this case the end standards 22 and 23 have both their front and rear portions cut off to the same height. Each rear portion at its upper end is pro-

vided with a strap hinge 24 having its pivot at 25 and having its top arm 26 lying across said standards to project at the front the projected end being slotted at 27 (Fig. 5) to receive the upper end of a plate 28 bolted to the front portion of the standard. Each plate 28 has a hole near its top end to receive a locking rod 29 mounted to slide in a bracket 30 and actuated by a handle 31 pivoted at 32 and pivotally connected with the locking rod at 33.

The main cross bar 34 of the wringer is mounted on the arms 26 of the hinges and carries the usual thumb screws 35 for adjusting the tension of the springs 36 whereby pressure is applied to articles being passed between the rolls.

With the handle 31 in normal position, as indicated in Fig. 4, the rods 29 projecting through the upper ends of brackets 28 will hold the arms 26 in horizontal position, thereby holding the cross bar 34 against displacement and holding the adjusting screws 35 to their work against springs 36. But in case of emergency, the operator may swing the handle 31 into the dotted position indicated in Fig. 4, thereby releasing the cross bar 34 and allowing it to swing over backward into the dotted position, Fig. 6, and thus releasing the tension on springs 36 and allowing the rolls of the wringer to separate.

Various changes in details may be made without departing from the spirit of my invention as defined by the appended claims.

I claim:—

1. In a wringer having a pair of wringer rolls suitably mounted in standards, the combination of a cross bar seated at the top of said standards and mounted at both ends on hinge members, an adjusting screw in each end of said cross bar for governing the pressure between the wringer rolls, arms projecting from said cross member at each end, latching means coöperating with said arms, and an emergency handle operatively connected to throw said latching means in emergency, thereby releasing the cross member and reducing the pressure between the wringer rolls.

2. In a device of the class described, the combination of a pair of wringer rolls mounted in standards, a cross bar seated in the top of said standards, a hinge member at either end of said cross bar, adjusting means in said cross bar for controlling the pressure between said wringer rolls, latching arms at either end of said cross bar for holding it in normal position, a handle pivoted to one of said standards and cooperating with one of said latching arms, a latch pivoted to the other standard and cooperating with a latch arm, and a link connecting said handle with said latch to insure simultaneous release of both ends of the cross bar when the handle is swung about its pivot.

3. The combination with a wringer having a cross bar, and adjusting means carried by the cross bar for controlling the pressure between the wringer rolls, of arms carried by the cross bar, the said arms being pivotally connected at one end to the wringer, latching means carried by the wringer and means whereby the latching means can be jointly operated to hold the opposite ends of said arms in a locked position for the purpose specified.

4. The combination with a wringer comprising standards having wringer rolls journaled therein, a cross bar adapted to rest upon the upper ends of said standards, and means associated with said cross bar for controlling the pressure between the wringer rolls, of arms carried by each end of said cross bar and extending transversely thereof, means for pivotally connecting one end of said arms to the said standards of the wringer, latching means adapted to engage the opposite ends of said arms, and an emergency handle for operating said latching means whereby the cross member may be released and the pressure reduced between the wringer rolls.

5. The combination with a wringer comprising standards having wringer rolls journaled therein, a cross bar, adjusting means carried by the cross bar for controlling the pressure between the wringer rolls, a pair of laterally extending arms carried by the cross bar, means for pivotally connecting one end of said arms to the standards of the wringer, a pair of latch members pivotally mounted upon the standards of the wringer and adapted to engage the opposite ends of the said arms, and means whereby said latch members may be jointly operated.

6. The combination with a wringer, of a cross bar, means carried by the cross bar for controlling the pressure between the wringer rolls, a pair of arms permanently secured to said cross bar, means for pivotally connecting one end of said arms to the wringer, a pair of latch members pivotally connected to the wringer at one end and adapted to engage the said arms at their opposite ends, a link for connecting said latch members, and an emergency handle carried by one of the said latch members whereby the same may be jointly operated.

7. The combination with a wringer comprising standards having wringer rolls journaled therein, and means for applying the pressure to the wringer rolls, of a cross bar, adjusting means carried by said cross bar for adjusting the pressure means, a pair of arms secured to said cross bar and extending transversely thereof, a rod carried by the wringer, the said arms being pivotally connected at one end to said rod, a handle pro-

jecting from one of the said arms, latching means carried by the wringer and adapted to engage said arms, and an emergency handle operatively connected to throw said latching means in an emergency thereby releasing the cross bar and reducing the pressure between the wringer rolls.

In witness whereof, I hereunto subscribe my name to this specification in the presence of two witnesses.

FRANK G. N. KRANICH.

Witnesses:
T. G. BRYANT,
W. H. A. THOMAS.